

REMARKS

Favorable reconsideration and allowance of this application are requested.

1. Discussion of Claim Amendments

By way of the amendment instructions above, the pending claims have been revised in an effort to clarify the same. Accordingly, upon entry of this amendment, revised versions of claims 1-15 will remain pending herein for consideration. Favorable action on such pending claims is requested.

2. Response to 35 USC §112 Issue

Claims 11-13 attracted a rejection under 35 USC §112, second paragraph as allegedly being indefinite due to the presence therein of an alleged "method limitation." In response, applicants respectfully disagree with the Examiner's statement that a method limitations in an apparatus claim is per se indefinite under 35 USC §112, second paragraph. Specifically, the objected-to phrase in fact recites the function of the sprayers and as such does not imbue the claims with statutory indefiniteness. In any event, the amended claims presented above clarify the claim language and are in a form more commensurate with US practice.

Withdrawal of the rejection advanced under 35 USC §112, second paragraph is therefore in order.

3. Response to Art- Based Rejections

A. 35 USC §103(a) Rejection of Claims 1-15

The Examiner has advanced a rejection of claims 1-15 as allegedly "obvious", and hence unpatentable, under 35 USC §103(a) over Niks et al or Kayaert et al or Bruynseels in view of Kono et al. Applicants respectfully suggest that such references fail to render obvious the present invention as claimed herein.

It will of course be appreciated that a principal distinguishing aspect of the present invention over the prior art is that the fluidization air, in a process for the preparation of urea granules in a fluid bed granulator where a urea melt having more than 97wt.% urea is sprayed, includes **water droplets**. This feature of the present invention should not be lightly overlooked when reviewing patentability as it allows for a substantial reduction in urea dust as compared to conventional fluid bed urea granulation processes.

Niks, Kayaert and Bruynseels all disclose conventional fluid bed urea granulation processes. In this regard, the Examiner acknowledges that such publications fail to disclose or suggest the fluidization air containing very finely atomized water. To cure this deficiency, the Examiner then cites Kono et al and asserts that"

"Kono et al disclose a process for producing urea granules in a fluidized bed, and disclose...that air or steam may be used as an atomizing gas." Official Action at page 2, lines 18-20.

Applicants suggest however that the Examiner's interpretation of Kono et al is in error which in turn has led to an erroneous conclusion of unpatentability under 35 USC §103(a).

Specifically, applicants note that Kono et al does in fact disclose that steam may be used to fluidize **the urea solution**. Specifically, Kono et al instruct the art that:

"In the case where an aqueous solution containing a high concentration of urea is atomized and injected into the fluidized bed, it is possible to use steam as an inert gas for *atomizing the urea solution*." (Kono et al at column 9, lines 29-32, emphasis added.)

Furthermore, Kono et al note that:

“Each of the inert gases to be blown through the holes of the funnel-shaped partition, the annular opening and the inert gas *to be used for atomizing the liquid* may be different from each other or the same...[and] may be selected from the group consisting of air, nitrogen gas, carbon dioxide gas...which gases are not reactive to urea and the liquid containing, for example, urea, sulphur and polyolefin.”
(Kono et al at column 9, line 67 through column 10, line 8, emphasis added.)

Thus, it is quite apparent that Kono et al’s disclosure of “atomizing gas” is for atomizing the urea solution – *not* for fluidizing *particles* of urea into which a urea melt is sprayed.

Moreover, Kono et al’s disclosure of **steam** – i.e., vaporous water – is not a disclosure of water **droplets** – i.e., liquid water – atomized in air. To be sure, all that Kono et al is instructing the art is that the urea solution may be atomized with an inert gas and a possible inert gas is water vapor in the form of steam.

In contrast, the presently claimed invention introduces a water-droplet containing fluidization air so as to fluidize urea *particles* such that a urea *melt* is sprayed on or over the fluidized urea particles.

Therefore, even if Kono et al’s teaching of employing steam as a fluidization gas were adopted in the processes of the primary references to Niks, Kayaert and Bruynseels, the present invention would not result since such fluidization gas would most certainly *not* be fluidization air containing very finely atomized **water droplets**.

Withdrawal of the rejection advanced under 35 USC §103(a) based Niks et al or Kayaert et al or Bruynseels in view of Kono et al.

B. 35 USC §§102(b) or 103(a) Rejection of Claims 11-15

The discussion above is equally germane to the patentability of claims 11-15 over Niks et al or Kayaert et al or Bruynseels.

Specifically, as should now be evident, none of these references disclose or suggest "water atomizers mounted below, in or above the distribution plate for atomizing water and introducing atomized water droplets into the fluidization air" as is defined by claims 11-15 pending herein.

As such, withdrawal of the rejection advanced under 35 USC § §102(b) or 103(a) based on Niks et al or Kayaert et al or Bruynseels should likewise be withdrawn.

4. Fee Authorization

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: /Bryan H. Davidson/
Bryan H. Davidson
Reg. No. 30,251

BHD:dlb
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100